Appendix G
Emission Inventory Documentation

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Appendix G. Emissions Inventory Documentation for the Imperial County PM_{10} Nonattainment Area Maintenance Plan

Emissions inventories are one of the fundamental building blocks in the development of a State Implementation Plan (SIP or Plan). In simple terms, an emissions inventory is a systematic listing of the sources of air pollution along with the amount of pollution emitted from each source or category over a given time period. This document describes the emissions inventory included in the Plan for the Imperial County PM_{10} Nonattainment Area.

The California Air Resources Board (CARB) and Imperial County Air Pollution Control District (District) have developed a comprehensive, accurate, and current emissions inventory consistent with the requirements set forth in Section 182(a)(1) of the federal Clean Air Act. CARB and District staff conducted a thorough review of the inventory to ensure that the emission estimates reflect accurate emission reports for point sources, and that estimates for mobile and areawide sources are based on the most recent models and methodologies.

CARB also reviewed the growth profiles for point and areawide source categories and updated them as necessary to ensure that the emission projections are based on data that reflect historical trends, current conditions, and recent economic and demographic forecasts. Growth forecasts for most point and areawide sources were developed either by CARB or by the Southern California Association of Governments (SCAG) and provided to CARB through the South Coast Air Quality Management District. SCAG is the metropolitan planning organization representing Imperial County, along with five other counties in Southern California.

Emissions Inventory Overview

Emissions inventories are estimates of the amount and type of pollutants emitted into the atmosphere by industrial facilities, mobile sources, and areawide sources such as consumer products and paint. They are fundamental components of an air quality plan, and serve critical functions such as:

1) the primary input to air quality modeling used in attainment demonstrations;
2) the emissions data used for developing control strategies; and
3) a means to track progress in meeting emission reduction commitments.

The United States Environmental Protection Agency (U.S. EPA) regulations require that the emissions inventory for a PM_{10} SIP contain emissions data for directly emitted PM_{10} and its precursors: oxides of nitrogen (NOx), sulfur oxides (SOx), volatile organic compounds (VOC), and ammonia (NH_3). The inventory included in this plan substitutes VOC with reactive organic gases (ROG), which in general represent a slightly broader group of compounds than those in U.S. EPA's list of VOCs. Although precursor emissions are included in this Plan, elevated PM_{10} concentrations in Imperial County are dominated by primary PM_{10} emissions from wind-blown dust rather than by

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secondarily formed PM_{10}. The precursor contribution analysis in Appendix A demonstrates that secondary formation is negligible compared with directly emitted PM_{10}.

Agency Responsibilities

CARB and District staff worked jointly to develop the emissions inventory for Imperial County. The District worked closely with operators of major stationary facilities in their jurisdiction to develop the point source emission estimates. CARB staff developed the emission inventory for mobile sources, both on-road and off-road. The District and CARB shared responsibility for developing estimates for the nonpoint (areawide) sources such as paved road dust and agricultural burning. CARB worked with several State and local agencies such as the Department of Transportation (Caltrans), the Department of Motor Vehicles (DMV), the Department of Pesticide Regulation (DPR), and the California Energy Commission (CEC) to assemble activity information necessary to develop the mobile and areawide source emission estimates.

Inventory Base Year

The base year inventory forms the basis for all future year projections and also establishes the emission levels against which progress in emission reductions will be measured. U.S. EPA regulations establish that the base year inventory should be preferably consistent with the triennial reporting schedule required under the Air Emissions Reporting Requirements (AERR) rule. However, U.S. EPA allows a different year to be selected if justified by the state. CARB worked with the local air districts to determine the base year that should be used across the State. Since the South Coast Air Quality Management District typically aligns their base year inventory with the data collection period for their Multiple Air Toxics Exposure Study, which was last conducted in 2012, CARB selected 2012 as the base year to maintain consistency across the various plans being developed in the State. A 2016 inventory was forecasted from this 2012 base year inventory. This coincides with the Plan's attainment year of 2016.

Forecasted Inventories

In addition to a base year inventory, U.S. EPA regulations also require future year inventory projections for specific years. Forecasted inventories are a projection of the base year inventory that reflects expected growth trends for each source category and emission reductions due to adopted control measures. CARB develops emission forecasts by applying growth and control profiles to the base year inventory.

Growth profiles for point and areawide sources are derived from surrogates such as economic activity, fuel usage, population, housing units, etc., that best reflect the expected growth trends for each specific source category. Growth projections were obtained primarily from government entities with expertise in developing forecasts for specific sectors, or in some cases, from econometric models. Control profiles, which account for emission reductions resulting from adopted rules and regulations, are

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derived from data provided by the regulatory agencies responsible for the affected emission categories.

Projections for mobile source emissions are generated by models that predict activity rates and vehicle fleet turnover by vehicle model year. As with stationary sources, the mobile source models include control algorithms that account for all adopted regulatory actions. This Plan includes forecasted emissions inventories for 2018-2030, which encompasses the maintenance period.

Temporal Resolution

Planning inventories typically include annual as well as seasonal (summer and winter) emission estimates. Annual emission inventories represent the total emissions over an entire year (tons per year), or the daily emissions produced on an average day (tons per day). Seasonal inventories account for temporal activity variations throughout the year, as determined by category-specific temporal profiles. The emission inventory used in the Plan is an annual inventory.

Quality Assurance and Quality Control

CARB has established a quality assurance and quality control (QA/QC) process involving CARB and District staff to ensure the integrity and accuracy of the emissions inventories used in the development of air quality plans. QA/QC occurs at the various stages of SIP emission inventory development. Base year emissions are assembled and maintained in the California Emission Inventory Development and Reporting System (CEIDARS). CARB inventory staff works with District staff, who are responsible for developing and reporting point source emission estimates, to verify these data are accurate. The locations of point sources, including stacks, are checked to ensure they are valid. Areawide source emission estimates are reviewed by CARB and District staff before their inclusion in the emission inventory. Additionally, CEIDARS is designed with automatic system checks to prevent errors such as double counting of emission sources. The system also makes various reports available to assist staff in their efforts to identify and reconcile anomalous emissions.

Future year emissions are estimated using the California Emission Projection Analysis Model (CEPAM), 2016 SIP Baseline Emission Projections, Version 1.05. Growth and control factors are reviewed for each category and year along with the resulting emission projections. Year to year trends are compared to similar and past datasets to ensure general consistency. Emissions for specific categories are checked to confirm they reflect the anticipated effects of applicable control measures. Mobile categories are verified with mobile source staff for consistency with the on-road and off-road emission models.

A summary of the information supporting the Imperial PM_{10} Nonattainment Area Maintenance Plan emissions inventory is presented in the sections below.

Point Sources

The inventory reflects actual emissions from industrial point sources reported to the District by the facility operators through calendar year 2012, in accordance with the requirements set forth in U.S. EPA's AERR rule. The data elements in the 2012 baseline inventory are consistent with the data elements required by the AERR rule. Estimation methods include source testing, direct measurement by continuous emissions monitoring systems, or engineering calculations. The point source categories that occur in the PM_{10} nonattainment area are listed below in Table 1.

Table 1
Point Source Categories

Source Category	Subcategory
Fuel Combustion	Electrical Utilities
	Cogeneration
	Manufacturing and Industrial
	Food and Agricultural Processing
	Service and Commercial
	Other (I.C. Reciprocating Engines)
Waste Disposal	Sewage Treatment
	Landfills
	Other
Cleaning and Surface Coatings	Laundering
	Degreasing
	Coatings and Thinners
	Adhesives and Sealants
Petroleum Production and Marketing	Petroleum Refining
	Petroleum Marketing
	Other (Petroleum Production & Marketing)
Industrial Processes	Food and Agriculture
	Mineral Processes

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The point source inventory includes emissions from stationary area sources, which are categories such as internal combustion engines and gasoline dispensing facilities that are not inventoried individually, but are estimated as a group and reported as an aggregated total. Estimates for the following categories were developed by CARB:

Stationary Nonagricultural Diesel Engines

This category includes emissions from backup and prime generators and pumps, air compressors, and other miscellaneous stationary diesel engines that are widely used throughout the industrial, service, institutional, and commercial sectors. The emission estimates, including emission forecasts, are based on a 2003 CARB methodology derived from the OFFROAD model. Additional information on this methodology is available at:
https://www.arb.ca.gov/ei/areasrc/FULLPDF/FULL1-2.pdf

Agricultural Diesel Irrigation Pumps

This category includes emissions from the operation of diesel-fueled stationary and mobile agricultural irrigation pumps. The emission estimates are based on a 2003 CARB methodology using statewide population and include replacements due to the Carl Moyer Program. Emissions are grown based on projected acreage for irrigated farmland. Additional information on this category is available at:
https://www.arb.ca.gov/ei/areasrc/arbfuelcombagric.htm

Waste Disposal, Composting Facilities

This category includes emissions from composting facilities that process organic materials via an open windrow composting or aerated static pile processes. The emission estimates are based on a 2015 CARB methodology using facility specific emissions testing or an emission factor derived from testing at composting facilities. No growth is assumed for future years. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/index2.htm

Laundering

This category includes emissions from perchloroethylene (perc) dry cleaning establishments. The emission estimates are based on a 2002 CARB methodology that used nationwide perc consumption rates allocated to the county level based on population and an emission factor of 10.125 pounds per gallon used. Emissions were grown from the original estimates to 2012 using human population growth trends from SCAG. Additional information on this methodology is available at:
https://www.arb.ca.gov/ei/areasrc/onehtm/one3-1.htm

Degreasing

This category includes emissions from solvents in degreasing operations in the manufacturing and maintenance industries. The emissions estimates are based on a 2000 CARB methodology using survey and industry data, activity factors, emission factors and a user's fraction. Growth for this category is based on CARB/REMI industry-

specific economic output. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbcleandegreas.htm

Coatings and Thinners

This category includes emissions from coatings and related process solvents. Auto refinishing emissions estimates are based on a 1990 CARB methodology using production data and a composite emission factor derived from surveys. Growth is based on projected vehicle miles traveled (VMT) provided by SCAG. Estimates for industrial coatings emissions are based on a 1990 CARB methodology using production and survey data, and emission factors derived from surveys. Estimates for thinning and cleaning solvents are based on a 1991 CARB methodology, census data and a default emission factor developed by CARB. Growth for these categories is projected using CARB/REMI industry-specific economic output and employment. Additional information on these methodologies is available at: https://www.arb.ca.gov/ei/areasrc/arbcleancoatreproc.htm

Adhesives and Sealants

This category includes emissions from solvent-based and water-based solvents contained in adhesives and sealants. Emissions are estimated based on a 1990 CARB methodology using production data and default emission factors. Growth for this category is based on CARB/REMI industry-specific economic output. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbcleanadhseal.htm

Gasoline Dispensing Facilities

CARB staff developed an updated methodology to estimate emissions from fuel transfer and storage operations at gasoline dispensing facilities (GDFs). The methodology addresses emissions from underground storage tanks, vapor displacement during vehicle refueling, customer spillage, and hose permeation. The updated methodology uses emission factors developed by CARB staff that reflect more current in-use test data and also accounts for the emission reduction benefits of onboard refueling vapor recovery (ORVR) systems. The emission estimates are based on the 2012 statewide gasoline sales data from the California Board of Equalization that were apportioned to the county level using fuel consumption estimates from CARB's on-road mobile sources model (EMFAC). Additional information on this category is available at: https://www.arb.ca.gov/ei/areasrc/arbpetprodmarkpm.htm

Areawide Sources

Areawide sources are categories such as consumer products, unpaved road dust, fireplaces, and prescribed burning for which emissions occur over a wide geographic area. Emissions for these categories are estimated by both CARB and the local air districts using various models and methodologies. The areawide sources are listed below in Table 2.

Table 2
Areawide Sources

Source Category	Subcategory
Solvent Evaporation	Consumer Products
	Architectural Coatings and Related Solvents
	Pesticides/Fertilizers
	Asphalt Paving and Roofing
Miscellaneous Processes	Residential Fuel Combustion
	Farming Operations
	Construction And Demolition
	Paved Road Dust
	Unpaved Road Dust
	Fugitive Windblown Dust
	Fires
	Managed Burning and Disposal
	Cooking
	Other (Miscellaneous Processes)

A summary of the areawide methodologies is presented below:

Ammonia Emissions from Publicly Owned Treatment Works, Landfills, Composting, Fertilizer Application, Domestic Activity, Native Animals, and Native Soils

CARB staff updated the ammonia emissions inventory methodology for publicly owned treatment works, landfills, composting, fertilizer application, domestic activity, native animals, and native soils. Revisions for these categories consist primarily of updated activity data for the 2008 calendar year. Emission factors were revised only for fertilizer application.

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Ammonia Emissions, Miscellaneous Sources

Ammonia emissions from miscellaneous domestic processes (human respiration and perspiration, smoking, pets, untreated human waste, etc.) were grown from a 2005 CARB estimate using DOF population projections. Ammonia emissions for other categories such as residential wood combustion, livestock husbandry, managed burning, and on-road motor vehicles, were estimated as part of the methodologies for those specific area source categories.

Consumer Products

The consumer products category reflects the four most recent surveys conducted by CARB staff for the years 2003, 2006, 2008, and 2010. Together these surveys collected updated product information and ingredient information for approximately 350 product categories. Based on the survey data, CARB staff determined the total product sales and total VOC emissions for the various product categories. The growth trend for most consumer product subcategories is based on the latest SCAG human population growth projections, except for aerosol coatings. Staff determined that a no-growth profile would be more appropriate for aerosol coatings based on survey data that show relatively flat sales of these products over the last decade. Additional information on CARB's consumer products surveys is available at: https://www.arb.ca.gov/consprod/survey/survey.htm.

Architectural Coatings

The architectural coatings category reflects emission estimates based on a comprehensive CARB survey for the 2004 calendar year. The emission estimates include benefits of the 2000 and 2007 CARB Suggested Control Measures. These emissions are grown based on SCAG projections for number of households. Additional information about CARB's architectural coatings program is available at: https://www.arb.ca.gov/coatings/arch/arch.htm

Pesticides

DPR develops month-specific emission estimates for agricultural and structural pesticides. Each calendar year, DPR updates the inventory based on the Pesticide Use Report, which provides updated information from 1990 to the most current data year available. The inventory includes estimates through the 2014 calendar year. For agricultural categories, emission forecasts for years 2015 and beyond are based on the average of the most recent five years. Growth for agricultural pesticides is based on CARB projections of harvested acreage provided by the U.S. Department of Agriculture (USDA). Growth for structural pesticides is based on CARB projections of housing expenditures.

Asphalt Paving/Roofing

Asphalt paving emissions for 2012 were estimated using a District methodology, and asphalt roofing emissions were grown from a 2005 estimate. Emissions are estimated based on tons of asphalt applied and a default emission factor for each type of asphalt

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operation. The growth profile for both categories is based on construction employment from the CARB/REMI forecasting model. Additional information on the District's methodology is available at: https://www.arb.ca.gov/ei/areasrc/distsolevapasphpav.htm

Residential Wood Combustion

CARB staff updated the methodology to reflect 2005 fuel use, and more recent emission factors and calculation approaches. The emission estimates reflect emission factors from U.S. EPA's National Emission Inventory. No growth is assumed for future years. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbmiscprocresfuelcom.htm

Farming Operations

CARB staff updated the inventory based on CARB methodologies for Agricultural Land Preparation and Agricultural Harvest Operations to reflect 2012 harvested crop acreage from the USDA's National Agricultural Statistics Service (NASS). NASS data are based on reports compiled by County Agricultural Commissioner staff. Emissions reflect crop and operation specific emission factors. Temporal profiles were updated based on crop specific activity profiles. In addition, the inventory reflects the emission reductions from District Rule 806. Growth is based on projected harvested acreage. The methodologies are available at: https://www.arb.ca.gov/ei/areasrc/arbmiscprocfarmops.htm

CARB staff updated the Livestock Husbandry methodology to reflect livestock population data based on the USDA's 2007 Census of Agriculture, and ammonia emission factors for dairy support cattle. A seasonal adjustment was added to account for the suppression of dust emissions in months in which rainfall occurs. Animal populations and emission factors for feedlots and dairies were updated for 2012 based on District data and California specific testing. CARB projects growth for feedlot cattle based on county livestock report data. Based on an analysis of livestock population trends, no growth is assumed for other livestock categories. In addition, the inventory reflects emission reductions from District Rules 420 and 217.
Additional information on CARB's methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbmiscproclivestock.htm

Additional information on the District's update is available here: https://www.arb.ca.gov/ei/areasrc/districtmeth/imperial/2016mar16_dairyfeedlotops.pdf

Construction and Demolition

Emission estimates for building construction and road construction were grown from CARB estimates developed in 2002 and 1997, respectively. The growth profile for both categories is based on construction employment from the CARB/REMI forecasting model. In addition, the inventory reflects emission reductions from District Rules 801, 802 and 805. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbmiscprocconstdem.htm

Paved Road Dust

Paved road dust emissions for 2012 were estimated using an CARB methodology consistent with the current U.S. EPA method (AP-42). The emission estimates are based on VMT provided by SCAG, California-specific silt loading values, VMT distribution (travel fractions) for various paved road categories, and an Imperial County specific rain adjustment. Emissions were grown using VMT projections from SCAG. The inventory also reflects the emission reductions from District Rules 803 and 805. Additional information is available at:
https://www.arb.ca.gov/ei/areasrc/arbmiscprocpaverddst.htm

Unpaved Road Dust – Farm Roads

Emissions for unpaved farm roads were updated based on CARB's methodology and 2012 harvested crop acreage from NASS. Emissions reflect crop specific VMT factors and an emission factor based on California test data conducted by the University of California, Davis (UC Davis), and the Desert Research Institute (DRI). Temporal profiles were updated based on crop specific activity profiles. Growth for this category is based on harvested acreage. In addition, the inventory reflects the emission reductions from District Rule 806. The methodology is available at:
https://www.arb.ca.gov/ei/areasrc/arbmiscprocunpaverddst.htm

Unpaved Nonfarm Road Dust

Emissions from unpaved nonfarm roads were estimated from 2008 unpaved road data collected from the California Statewide Local Streets and Roads Needs Assessment, Caltrans, and local agencies. Dust emissions were calculated using an emission factor derived from tests conducted by UC Davis and DRI. In addition, a rainfall adjustment factor was applied. Staff assumed no growth for this category based on the assumption that existing unpaved roads tend to get paved as vehicle traffic on them increases, which counteracts any additional emissions from new unpaved roads. The inventory also reflects the emission reductions from District Rule 805. Additional information on this methodology is available at:
https://www.arb.ca.gov/ei/areasrc/arbmiscprocunpaverddst.htm

Fugitive Windblown Dust from Open Areas and Non-pasture Agriculture Lands

The District provided estimates of windblown fugitive dust derived from a model developed by ENVIRON Inc. under a contract with the District. The model assesses emission characteristics, hourly emission factors and hourly meteorological data for each land parcel within the modeling domain, and applies correction terms based on vegetative cover, as well as non-climatic corrections for agricultural lands. Based on these inputs, the model was used to estimate fugitive windblown dust emission from open areas and non-pasture agriculture lands in the Imperial County PM_{10} Nonattainment Area. Growth for agricultural lands is based on projected acreage from the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP). No growth is assumed for non-agricultural lands. The inventory also reflects the emission reductions from District Rules 804 and 806. Additional information

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about CARB's methodology is available at:
https://www.arb.ca.gov/ei/areasrc/arbmiscprocfugwbdst.htm

Windblown Dust from Unpaved Roads

Emissions for this source category were estimated based on a 1997 CARB methodology reflecting unpaved road mileage and local parameters that affect wind erosion. The estimates assume no growth. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbmiscprocfugwbdst.htm

Fires

Emissions from structural and automobile fires were estimated based on a 1999 CARB methodology using the number of fires and the associated emission factors. Estimates for structural fires are calculated using the amount of the structure that is burned, the amount and content of the material burned, and emission factors derived from test data. Estimates for automobile fires are calculated using the weight of the car and components and composite emission factors derived from AP-42 emission factors. No growth is assumed for this category. Additional information on this methodology is available at: https://www.arb.ca.gov/ei/areasrc/arbmiscprocfires.htm

Managed Burning & Disposal

CARB updated the emissions inventory to reflect burn data reported by District staff for 2012. Emissions are calculated using crop specific emission factors and fuel loadings. Temporal profiles reflect monthly burn activity. Growth for agricultural burning is based on projected harvested acreage. No growth is assumed for burning associated with weed abatement. CARB's methodology for managed burning is available at:
https://www.arb.ca.gov/ei/areasrc/distmiscprocwstburndis.htm
Additional background information is available here:
https://www.arb.ca.gov/ei/see/see.htm

Commercial Cooking

Commercial cooking emissions were grown from a 2005 estimate. The emissions estimates were developed from the number of restaurants, the number and types of cooking equipment, the food type, and default emission factors. The growth profile reflects the latest population projections provided by SCAG.

Point and Areawide Source Emissions Forecasting

Emission forecasts (2013 and subsequent years) are based on growth profiles that in many cases incorporate historical trends up to the base year or beyond. The growth surrogates used to forecast the emissions from these categories are presented below in Table 3.

Table 3
Growth Surrogates for Point and Areawide Sources

Source Category	Subcategory	Growth Surrogate
Fuel Combustion	Electric Utilities	SoCAL Gas Company (SCG) 2014 report
	Cogeneration	ARB/REMI industry-specific economic output
	Manufacturing and Industrial Area Source/Natural Gas	SCG 2014 report
	Manufacturing and Industrial Others	ARB/REMI industry-specific economic output
	Food and Agricultural Processing Ag Irrigation I. C. Engines	Modeled estimate
	Food and Agricultural Processing Point Sources	ARB/REMI industry-specific economic output
	Service and Commercial Natural Gas	SCG 2014 Report
	Service and Commercial Other Fuels	ARB/REMI industry-specific employment
	Other, Diesel	ARB EMFAC model for fuel consumption
	Other Fuels	ARB/REMI industry specific economic output/employment
Waste Disposal	Sewage Treatment	SCAG population
	Landfills	SCAG population
	Other (Composting)	No growth
Laundering	Dry Cleaning	SCAG population
Degreasing	All	ARB/REMI industry-specific economic output
Coatings & Thinners	Auto Refinishing	SCAG Vehicle Miles Traveled (VMT)
	Others	ARB/REMI industry specific economic output/employment
Adhesives & Sealants	All	ARB/REMI industry-specific economic output
Petroleum Refining	All	ARB EMFAC model fuel consumption
Petroleum Marketing	All	ARB EMFAC model fuel consumption
Petroleum Production & Marketing	All	ARB/REMI industry-specific economic output
Food & Agriculture	All	ARB/REMI industry specific economic output

Table 3
Growth Surrogates for Point and Areawide Sources

Source Category	Subcategory	Growth Surrogate
Mineral Processes	All	ARB/REMI industry-specific economic output/employment
Other Industrial Processes	Electrical Power Generation	SCG 2014 report
	Others	ARB/REMI industry-specific economic output
Consumer Products	Consumer Products	SCAG population
	Aerosol Coatings	No growth
Architectural Coatings and Related Process Solvents	All	SCAG households
Pesticides/Fertilizers	Agricultural Pesticides	Harvested acreage
	Structural Pesticides	ARB housing expenditure
Asphalt Paving/Roofing	All	ARB/REMI industry-specific employment
Residential Fuel Combustion	Natural Gas	SCG 2014 report
	Woodstoves & Fireplaces - Wood	No growth
	Water Heating	SCAG households
	Cooking	SCAG households
	Other	SCAG households
Farming Operations	Tilling & Harvest Operations	Harvested acreage
	Livestock / Feedlot Cattle	County livestock report data/ARB
	Livestock / Others	No growth
Construction & Demolition	All	ARB/REMI industry-specific employment
Paved Road Dust	All	SCAG VMT
Unpaved Road Dust	Farm Roads	Harvested acreage
	Others	No growth
Fugitive Windblown Dust	Agricultural & Pasture Lands	ARB FMMP data
	Others	No growth
Fires	All	No growth
Managed Burning & Disposal	Agricultural Burning, Prunings & Field Crops	Harvested acreage
	Weed Abatement	No growth
Cooking	All	SCAG population
Other (Miscellaneous Processes)	All	SCAG population

Stationary Source Control Profiles

The emissions inventory reflects emission reductions from point and areawide sources subject to District rules and CARB regulations. The rules and regulations reflected in the inventory are listed below in Table 4.

Table 4
District and ARB Stationary and Areawide Source Control Rules and Regulations Included in the Inventory

Agency	Rule/Reg No.	Rule Title	Source Categories Impacted
District	217	Large Confined Animal Facilities (LCAF) Permits Required	Livestock Husbandry
District	420	Beef Feedlots	Livestock Operations
District	801	Construction and Earthmoving Activities	Construction and Demolition
District	802	Bulk Materials	Point Sources
District	803	Carry-Out and Track-Out	Paved Roads
District	804	Open Areas	Windblown Dust
District	805	Paved and Unpaved Roads	Paved and Unpaved Non-farm Roads
District	806	Conservation Management Practices	Tilling and Harvesting Operations, Windblown Dust, Unpaved Farm Roads Unpaved Traffic Areas
CARB	AC_SCM2007	Architectural Coatings 2007 SCM	Architectural coatings
CARB	ARCH_SCM	Architectural Coatings 2000 SCM	Architectural coatings
CARB	ARB_R003	Consumer Product Regulations & Amendments	Consumer products
CARB	ARB_R003_A	Consumer Product Regulations & Amendments	Consumer products
CARB	ARB_R007	Aerosol Coating Regulation	Consumer products / Aerosol coatings
CARB	GDF_HOSREG	Gasoline Dispensing Facilities - Hose Permeation	Petroleum marketing
CARB	ORVR	Fueling emissions from ORVR vehicles	Petroleum marketing

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Mobile Sources

CARB uses the EMFAC model to assess emissions from on-road vehicles. Off-road mobile source emissions are estimated using a new modular approach for different source categories. On-road and off-road models account for the effects of various adopted regulations, technology types, and seasonal conditions on emissions.

On-Road Mobile Sources

Emissions from on-road mobile sources, which include passenger vehicles, buses, and trucks, were estimated using outputs from CARB's EMFAC2014 model. The on-road emissions were calculated by applying EMFAC2014 emission factors to the transportation activity data provided by SCAG from their 2016 adopted Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS).

EMFAC2014 includes data on California's car and truck fleets and travel activity. Light-duty motor vehicle fleet age, vehicle type, and vehicle population were updated based on 2012 DMV data. The model also reflects the emissions benefits of CARB's recent rulemakings such as the Pavley Standards and Advanced Clean Cars Program, and includes the emissions benefits of CARB's Truck and Bus Rule and previously adopted rules for other on-road diesel fleets.

EMFAC2014 utilizes a socio-econometric regression modeling approach to forecast new vehicle sales and to estimate future fleet mix. Light-duty passenger vehicle population includes 2012 DMV registration data along with updates to mileage accrual using Smog Check data. Updates to heavy-duty trucks include model year specific emission factors based on new test data, and population estimates using DMV data for in-state trucks and International Registration Plan (IRP) data for out-of-state trucks.

Additional information and documentation on the EMFAC2014 model is available at: https://www.arb.ca.gov/msei/categories.htm#emfac2014

Off-Road Mobile Sources

Emissions from off-road sources were estimated using a suite of category-specific models or, where a new model was not available, the OFFROAD2007 model. Many of the newer models were developed to support recent regulations, including in-use off-road equipment, ocean-going vessels and others. The sections below summarize the updates made to specific off-road categories.

Cargo Handling Equipment (CHE)

The emissions inventory for the Cargo Handling Equipment category has been updated to reflect new information on equipment population, activity, recessionary impacts on growth, and engine load. The new information includes regulatory reporting data which provide an accounting of all the cargo handling equipment in the State including their

model year, horsepower and activity. Background and supporting documents for the Cargo Handling Equipment Regulation are available here:
https://www.arb.ca.gov/ports/cargo/cheamd2011.htm

Pleasure Craft and Recreational Vehicles

A new model was developed in 2011 to estimate emissions from pleasure craft and recreational vehicles. In both cases, population, activity, and emission factors were re-assessed using new surveys, registration information, and emissions testing. Additional information is available at:
https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles

In-Use Off-Road Equipment

CARB developed this model in 2010 to support the analysis for amendments to the In-Use Off-Road Diesel Fueled Fleets Regulation. Staff updated the underlying activity forecast to reflect more recent economic forecast data, which suggests a slower rate of recovery through 2024 than previously anticipated. Additional information is available at:
https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles

Locomotives

In 2016, CARB updated California's Class I and Class II line-haul locomotive model. The new model provides the following updates: age and model year distribution based on 2011 and 2014 rail company data, activity based on FAF data, fuel growth based on Board of Equalization historical rail data, and new locomotive populations, survival rates, and Tier distributions. To estimate emissions, CARB used duty cycle, fuel consumption and activity data reported by the rail lines in 2011. These results were combined with the Class III locomotive emissions inventory from previous SIPS, that were incorporated in the 2006 locomotive inventory, to create an overall California line-haul locomotive emissions inventory for the SIP. More information may be found at https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles.

Transport Refrigeration Units (TRU)

This model reflects updates to activity, population, growth and turn-over data, and emission factors developed to support the 2011 amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units. Additional information is available at:
https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles

Fuel Storage and Handling

Emissions for fuel storage and handling were estimated using the OFFROAD2007 model. Additional information is available at:
https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles

Diesel Agricultural Equipment

The inventory for agricultural diesel equipment (such as tractors, harvesters, combines, sprayers and others) was revised based on a 2008 survey of thousands of farmers, custom operators, and first processors. The survey data, along with information from the 2007 USDA Farm Census, was used to revise almost every aspect of the agricultural inventory, including population, activity, age distribution, fuel use, and allocation. This updated inventory replaces general information on farm equipment in the United States with one specific to California farms and practices. The updated inventory was compared against other available data sources such as Board of Equalization fuel reports, USDA tractor populations and age, and Eastern Research Group tractor ages and activity, to ensure the results were reasonable and compared well against outside data sources. Agricultural growth rates through 2050 were developed through a contract with URS Corp and UC Davis. Additional information is available at: https://www.arb.ca.gov/msei/categories.htm#offroad_motor_vehicles

Military Aircraft

Baseline emission estimates were developed for the El Centro Naval Air Facility by El Centro staff based on actual operational data and were submitted by the District.

Mobile Source Forecasting

Table 5 summarizes the data and methods used to forecast future-year mobile source emissions by broad source category groupings.

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Table 5
Growth Surrogates for Mobile Sources

Category	***Growth Methodology***
On-Road Sources	
All	*Match total VMT projections provided by SCAG*
Off-Road Gasoline Fueled Equipment	
Lawn & Garden	*Household growth projection*
Off-Road Equipment	Employment growth projection
Recreational Boats	Housing starts (short-term) and human population growth (long-term)
Recreational Vehicles	Housing starts (short-term) and human population growth (long-term)
Off-Road Diesel-Fueled Equipment	
Construction and Mining	California construction employment data from U.S. Bureau of Labor Statistics
Farm Equipment	2011 study of forecasted growth by URS Corp.
Industrial Equipment	California construction employment data from Bureau of Labor Statistics
Trains (line haul)	Freight Analysis Framework (FAF) 2015 growth projections and historical Bureau of Transportation Statistics locomotive fuel trends (1990-2013 data)
Transport Refrigeration Units	Projection of historical Truck/Trailer TRU sales from ACT Research, adjusted for recession.
Off-Road Equipment (Other Fuels)	
Military Aircraft	The growth for military aircraft are based on estimates from El Centro Naval Air Facility staff that facilitate the fielding of new weapons systems, potentially expanding operations that accommodate all activities necessary to continue the national security mission.

Condensable Particulate Matter

Background

Condensable particulate matter (PM) is "material that is vapor phase at stack conditions, but which condenses and/or reacts upon cooling and dilution in the ambient air to form solid or liquid PM immediately after discharge from the stack."[1] Condensable PM is a component of primary PM, which is the sum of condensable and filterable PM. Filterable PM comprises "particles that are directly emitted by a source as a solid or liquid [aerosol] at stack or release conditions."[2] All condensable PM is assumed to be smaller than 2.5 microns (µm) in diameter; therefore, PM_{10} primary encompasses condensable PM and filterable PM less than 10µm, while $PM_{2.5}$ primary encompasses condensable PM and filterable PM less than 2.5µm. Consequently, the condensable PM value within PM_{10} primary and $PM_{2.5}$ primary are the same.

The AERR requires states to report annual emissions of filterable and condensable components of PM_{10} and $PM_{2.5}$, "as applicable," for large sources every inventory year and for all sources every third inventory year, beginning with 2011.[3] Subsequent emissions inventory guidance[4] from the U.S. EPA clarifies the meaning of the phrase "as applicable" by providing a list of source types "for which condensable PM is expected by the AERR." These source types are stationary point and nonpoint combustion sources that are expected to generate condensable PM and include, for instance, commercial cooking, fuel combustion at electric generating utilities, industrial processes like cement or chemical manufacturing, and flares or incinerators associated with waste disposal. The District reports condensable PM from stationary and area sources using the methodology outlined below.

Mobile sources emit PM in both filterable and condensable form; however, the AERR does not require states to report filterable and condensable PM separately for mobile sources. Emissions from mobile sources are reported in the emissions inventory in Appendix G as primary PM, e.g. the sum of filterable and condensable PM.

Methodology

For future emissions inventory cycles, the District intends to gather condensable PM data for stationary and area sources directly as part of routine data collection. In all previous inventories, however, the District has collected data on primary PM only, containing both filterable and condensable components without distinguishing between the two. Consequently, to be able to report emissions of the condensable component of PM_{10} separately as required by the AERR, the District must use conversion factors to convert primary PM to condensable PM.

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[1] 40 CFR §51.50
[2] Ibid.
[3] 40 CFR §51.15(a)(1) and §51.30(b)(1)
[4] U.S. EPA. *Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations*. May 2017. https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf

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U.S. EPA has published an augmentation tool[5] which contains conversion factors for each source classification code (SCC) to convert filterable PM_{10} (PM10FIL) to condensable PM (PMCON). In this form, these conversion factors ($CF_{PM10FIL \rightarrow PMCON}$) are not useful because the District does not directly collect PM10FIL data. But, the following formula adjusts U.S. EPA's existing conversion factors to obtain new conversion factors for each SCC that convert from primary PM_{10} (PM10PRI)—data which the District does collect—to condensable PM ($CF_{PM10PRI \rightarrow PMCON}$):

$$CF_{PM10PRI \rightarrow PMCON} = \frac{CF_{\mathrm{PM10FIL \rightarrow PMCON}}}{(1 + CF_{\mathrm{PM10FIL \rightarrow PMCON}})}$$

The formula was derived as follows:

$$PM10PRI = PM10FIL + PMCON$$

and

$$PMCON = PM10FIL\,(CF_{\mathrm{PM10FIL \rightarrow PMCON}})$$

and

$$PMCON = PM10PRI(CF_{\mathrm{PM10PRI \rightarrow PMCON}})$$

$$\therefore \quad PM10PRI = PM10FIL + PM10FIL\,(CF_{\mathrm{PM10FIL \rightarrow PMCON}})$$
$$= PM10FIL(1 + CF_{\mathrm{PM10FIL \rightarrow PMCON}})$$

and

$$CF_{\mathrm{PM10PRI \rightarrow PMCON}} = \frac{PMCON}{PM10PRI} = \frac{PMCON}{PM10FIL(1 + CF_{\mathrm{PM10FIL \rightarrow PMCON}})}$$
$$= \frac{PM10FIL\,(CF_{\mathrm{PM10FIL \rightarrow PMCON}})}{PM10FIL(1 + CF_{\mathrm{PM10FIL \rightarrow PMCON}})} = \frac{CF_{\mathrm{PM10FIL \rightarrow PMCON}}}{(1 + CF_{\mathrm{PM10FIL \rightarrow PMCON}})}$$

To ensure that the calculated condensable PM values are smaller than the District-reported $PM_{2.5}$ values, a 1:1 ratio between PM_{10} and $PM_{2.5}$ is assumed, and the derived conversion factors are applied to convert primary $PM_{2.5}$ (PM25PRI) to condensable PM using the same method. That is, $CF_{PM10PRI \rightarrow PMCON} = CF_{PM25PRI \rightarrow PMCON}$ where $CF_{PM25PRI \rightarrow PMCON}$ represents the conversion factors that convert from primary $PM_{2.5}$—again, data the District does collect—to condensable PM. The resulting calculated condensable PM value is then the PMCON portion of both PM2.5PRI and PM10PRI since the condensable PM value within primary $PM_{2.5}$ are one and the same as the condensable PM value within primary PM_{10}.

[5] U.S. EPA. *PM Augmentation*. Air Emissions Inventories. May 20, 2016. https://www.epa.gov/air-emissions-inventories/pm-augmentation

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Table H-1a. PM_{10} Emissions by Major Source Category in Imperial County, 2016-2030
Imperial County PM_{10} Plan

Source Category	PM_{10} (tons/day)														
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stationary Sources															
Fuel Combustion	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Electric Utilities	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*
Cogeneration	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Manufacturing and Industrial	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*
Food and Agricultural Processing	*0.01*	*0.01*	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Service and Commercial	*0.07*	*0.07*	*0.07*	*0.07*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.07*	*0.08*	*0.08*
Other (Fuel Combustion)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Waste Disposal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sewage Treatment	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Landfills	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Waste Disposal)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laundering	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Refining	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	3.99	4.14	4.27	4.41	4.56	4.69	4.83	4.96	5.10	5.25	5.39	5.54	5.69	5.85	6.01
Food and Agriculture	*0.30*	*0.31*	*0.31*	*0.32*	*0.32*	*0.33*	*0.33*	*0.34*	*0.34*	*0.35*	*0.35*	*0.36*	*0.36*	*0.37*	*0.37*
Mineral Processes	*3.67*	*3.81*	*3.95*	*4.08*	*4.22*	*4.35*	*4.48*	*4.61*	*4.75*	*4.89*	*5.03*	*5.17*	*5.32*	*5.47*	*5.62*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Industrial Processes)	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Total Stationary Sources	**4.19**	**4.33**	**4.47**	**4.61**	**4.76**	**4.90**	**5.04**	**5.17**	**5.31**	**5.46**	**5.60**	**5.75**	**5.90**	**6.06**	**6.22**
Areawide Sources															
Solvent Evaporation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solv	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Asphalt Paving/Roofing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	278.48	278.58	278.69	278.69	278.75	278.81	277.30	277.28	277.33	277.39	277.39	277.45	277.51	277.57	277.64
Residential Fuel Combustion	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*
Farming Operations	*8.48*	*8.42*	*8.37*	*8.31*	*8.25*	*8.22*	*8.20*	*8.17*	*8.14*	*8.11*	*8.09*	*8.06*	*8.03*	*8.00*	*7.98*
Construction and Demolition	*3.02*	*3.16*	*3.29*	*3.40*	*3.51*	*3.59*	*3.66*	*3.71*	*3.76*	*3.82*	*3.90*	*3.98*	*4.06*	*4.14*	*4.22*
Paved Road Dust	*1.16*	*1.20*	*1.27*	*1.24*	*1.28*	*1.30*	*1.38*	*1.35*	*1.39*	*1.43*	*1.40*	*1.42*	*1.45*	*1.47*	*1.50*
Unpaved Road Dust	*51.88*	*51.87*	*51.85*	*51.84*	*51.83*	*51.82*	*50.22*	*50.21*	*50.20*	*50.20*	*50.19*	*50.18*	*50.18*	*50.17*	*50.16*
Fugitive Windblown Dust	*212.52*	*212.51*	*212.51*	*212.50*	*212.50*	*212.49*	*212.49*	*212.48*	*212.48*	*212.47*	*212.47*	*212.46*	*212.46*	*212.45*	*212.45*
Fires	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Managed Burning and Disposal	*1.30*	*1.28*	*1.27*	*1.26*	*1.25*	*1.24*	*1.23*	*1.23*	*1.22*	*1.22*	*1.21*	*1.20*	*1.20*	*1.19*	*1.19*
Cooking	*0.08*	*0.08*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*	*0.10*
Other (Miscellaneous Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Areawide Sources	**278.48**	**278.58**	**278.69**	**278.69**	**278.75**	**278.81**	**277.30**	**277.28**	**277.33**	**277.39**	**277.39**	**277.45**	**277.51**	**277.57**	**277.64**
Mobile Sources															
On-Road Vehicles	0.43	0.43	0.44	0.43	0.44	0.44	0.46	0.45	0.46	0.48	0.47	0.48	0.49	0.50	0.51
Off-Road Vehicles	1.07	1.06	1.05	1.05	1.04	1.04	1.04	1.55	1.55	1.55	1.56	1.57	1.57	1.58	1.59
Total Mobile Sources	**1.50**	**1.49**	**1.49**	**1.47**	**1.48**	**1.48**	**1.50**	**1.99**	**2.01**	**2.03**	**2.03**	**2.04**	**2.06**	**2.08**	**2.09**
Total for Imperial County	**284.17**	**284.40**	**284.65**	**284.77**	**284.99**	**285.19**	**283.84**	**284.44**	**284.66**	**284.88**	**285.02**	**285.24**	**285.48**	**285.71**	**285.96**

Notes:
Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.
Totals may not add up due to rounding.

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Table H-1b. Condensable/Filterable PM_{10} Emissions by Major Source Category in Imperial County, 2016

Imperial County PM_{10} Plan

Source Category	PM_{10} Emissions (tons/day)		
	Total	Condensable	Filterable
Stationary Sources			
Fuel Combustion	0.199	0.028	0.171
Electric Utilities	*0.091*	*0.025*	*0.066*
Cogeneration	*0.002*	*0.001*	*0.001*
Manufacturing and Industrial	*0.029*	*0.000*	*0.028*
Food and Agricultural Processing	*0.005*	*0.001*	*0.004*
Service and Commercial	*0.072*	*0.000*	*0.071*
Other (Fuel Combustion)	*0.000*	*0.000*	*0.000*
Waste Disposal	0.000	0.000	0.000
Sewage Treatment	*0.000*	*0.000*	*0.000*
Landfills	*0.000*	*0.000*	*0.000*
Other (Waste Disposal)	*0.000*	*0.000*	*0.000*
Cleaning and Surface Coatings	0.000	0.000	0.000
Laundering	*0.000*	*0.000*	*0.000*
Degreasing	*0.000*	*0.000*	*0.000*
Coatings and Related Process Solvents	*0.000*	*0.000*	*0.000*
Adhesives and Sealants	*0.000*	*0.000*	*0.000*
Petroleum Production and Marketing	0.000	0.000	0.000
Petroleum Refining	*0.000*	*0.000*	*0.000*
Petroleum Marketing	*0.000*	*0.000*	*0.000*
Other (Petroleum Production and Marketing)	*0.000*	*0.000*	*0.000*
Industrial Processes	3.989	0.010	3.980
Food and Agriculture	*0.305*	*0.003*	*0.301*
Mineral Processes	*3.672*	*0.006*	*3.666*
Metal Processes	*0.000*	*0.000*	*0.000*
Other (Industrial Processes)	*0.013*	*0.000*	*0.013*
Total Stationary Sources	**4.188**	**0.038**	**4.150**
Areawide Sources			
Solvent Evaporation	0.000	0.000	0.000
Consumer Products	*0.000*	*0.000*	*0.000*
Architectural Coatings and Related Process Solvents	*0.000*	*0.000*	*0.000*
Pesticides/Fertilizers	*0.000*	*0.000*	*0.000*
Asphalt Paving/Roofing	*0.000*	*0.000*	*0.000*
Miscellaneous Processes	278.479	0.080	278.400
Residential Fuel Combustion	*0.046*	*0.000*	*0.046*
Farming Operations	*8.481*	*0.000*	*8.481*
Construction and Demolition	*3.017*	*0.000*	*3.017*
Paved Road Dust	*1.158*	*0.000*	*1.158*
Unpaved Road Dust	*51.881*	*0.000*	*51.881*
Fugitive Windblown Dust	*212.515*	*0.000*	*212.515*
Fires	*0.004*	*0.000*	*0.004*
Managed Burning and Disposal	*1.297*	*0.000*	*1.297*
Cooking	*0.080*	*0.080*	*0.000*
Other (Miscellaneous Processes)	*0.000*	*0.000*	*0.000*
Total Areawide Sources	**278.479**	**0.080**	**278.400**
Mobile Sources			
On-Road Vehicles	0.433	--	--
Off-Road Vehicles	1.066	--	--
Total Mobile Sources	**1.499**	**--**	**--**
Total for Imperial County	**284.167**	**--**	**--**

Notes:

Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.

"--" indicates that the portion of condensable/filterable PM is unknown/unmeasurable.

The condensable portion of each inventory category was calculated using an individual, source-specific conversion factor applied to the reported PM emissions value. The filterable portion was then calculated as the difference between the PM emissions value and its condensable portion.

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Table H-1c. Condensable/Filterable PM_{10} Emissions by Major Source Category in Imperial County, 2030

Imperial County PM_{10} Plan

Source Category	PM_{10} Emissions (tons/day)		
	Total	Condensable	Filterable
Stationary Sources			
Fuel Combustion	0.212	0.031	0.181
Electric Utilities	*0.099*	*0.027*	*0.071*
Cogeneration	*0.002*	*0.001*	*0.001*
Manufacturing and Industrial	*0.032*	*0.001*	*0.032*
Food and Agricultural Processing	*0.003*	*0.001*	*0.002*
Service and Commercial	*0.075*	*0.000*	*0.075*
Other (Fuel Combustion)	*0.000*	*0.000*	*0.000*
Waste Disposal	0.000	0.000	0.000
Sewage Treatment	*0.000*	*0.000*	*0.000*
Landfills	*0.000*	*0.000*	*0.000*
Other (Waste Disposal)	*0.000*	*0.000*	*0.000*
Cleaning and Surface Coatings	0.000	0.000	0.000
Laundering	*0.000*	*0.000*	*0.000*
Degreasing	*0.000*	*0.000*	*0.000*
Coatings and Related Process Solvents	*0.000*	*0.000*	*0.000*
Adhesives and Sealants	*0.000*	*0.000*	*0.000*
Petroleum Production and Marketing	0.000	0.000	0.000
Petroleum Refining	*0.000*	*0.000*	*0.000*
Petroleum Marketing	*0.000*	*0.000*	*0.000*
Other (Petroleum Production and Marketing)	*0.000*	*0.000*	*0.000*
Industrial Processes	6.009	0.012	5.996
Food and Agriculture	*0.371*	*0.004*	*0.367*
Mineral Processes	*5.623*	*0.008*	*5.615*
Metal Processes	*0.000*	*0.000*	*0.000*
Other (Industrial Processes)	*0.015*	*0.000*	*0.015*
Total Stationary Sources	**6.221**	**0.043**	**6.178**
Areawide Sources			
Solvent Evaporation	0.000	0.000	0.000
Consumer Products	*0.000*	*0.000*	*0.000*
Architectural Coatings and Related Process Solvents	*0.000*	*0.000*	*0.000*
Pesticides/Fertilizers	*0.000*	*0.000*	*0.000*
Asphalt Paving/Roofing	*0.000*	*0.000*	*0.000*
Miscellaneous Processes	277.642	0.100	277.542
Residential Fuel Combustion	*0.046*	*0.000*	*0.046*
Farming Operations	*7.977*	*0.000*	*7.977*
Construction and Demolition	*4.221*	*0.000*	*4.221*
Paved Road Dust	*1.497*	*0.000*	*1.497*
Unpaved Road Dust	*50.164*	*0.000*	*50.164*
Fugitive Windblown Dust	*212.447*	*0.000*	*212.447*
Fires	*0.004*	*0.000*	*0.004*
Managed Burning and Disposal	*1.186*	*0.000*	*1.186*
Cooking	*0.100*	*0.100*	*0.000*
Other (Miscellaneous Processes)	*0.000*	*0.000*	*0.000*
Total Areawide Sources	**277.642**	**0.100**	**277.542**
Mobile Sources			
On-Road Vehicles	0.507	--	--
Off-Road Vehicles	1.588	--	--
Total Mobile Sources	**2.094**	**--**	**--**
Total for Imperial County	**285.957**	**--**	**--**

Notes:

Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.

"--" indicates that the portion of condensable/filterable PM is unknown/unmeasurable.

The condensable portion of each inventory category was calculated using an individual, source-specific conversion factor applied to the reported PM emissions value. The filterable portion was then calculated as the difference between the PM emissions value and its condensable portion.

ED_004125_00037442-00024

Table H-2. ROG Emissions by Major Source Category in Imperial County, 2016-2030
Imperial County PM_{10} Plan

Source Category	ROG (Tons/day)														
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stationary Sources															
Fuel Combustion	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Electric Utilities	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Cogeneration	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Manufacturing and Industrial	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*
Food and Agricultural Processing	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Service and Commercial	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*
Other (Fuel Combustion)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Waste Disposal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sewage Treatment	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Landfills	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Waste Disposal)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	0.59	0.59	0.60	0.60	0.61	0.63	0.64	0.65	0.67	0.69	0.70	0.72	0.74	0.76	0.78
Laundering	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Degreasing	*0.30*	*0.30*	*0.30*	*0.30*	*0.31*	*0.31*	*0.32*	*0.33*	*0.33*	*0.34*	*0.35*	*0.36*	*0.38*	*0.39*	*0.40*
Coatings and Related Process Solvents	*0.19*	*0.20*	*0.20*	*0.20*	*0.21*	*0.21*	*0.22*	*0.22*	*0.22*	*0.23*	*0.23*	*0.24*	*0.24*	*0.25*	*0.25*
Adhesives and Sealants	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.10*	*0.10*	*0.10*	*0.11*	*0.11*	*0.11*	*0.12*	*0.12*
Petroleum Production and Marketing	0.67	0.66	0.65	0.64	0.63	0.62	0.61	0.60	0.59	0.58	0.57	0.56	0.56	0.55	0.55
Petroleum Refining	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.67*	*0.66*	*0.65*	*0.64*	*0.63*	*0.62*	*0.61*	*0.60*	*0.59*	*0.58*	*0.57*	*0.56*	*0.55*	*0.55*	*0.54*
Other (Petroleum Production and Marketing)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Food and Agriculture	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Mineral Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.01*	*0.01*	*0.01*	*0.01*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Industrial Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Stationary Sources	**1.36**	**1.36**	**1.36**	**1.35**	**1.35**	**1.36**	**1.36**	**1.36**	**1.37**	**1.38**	**1.38**	**1.39**	**1.41**	**1.42**	**1.44**
Areawide Sources															
Solvent Evaporation	3.50	3.54	3.59	3.63	3.67	3.69	3.71	3.72	3.74	3.75	3.77	3.78	3.80	3.82	3.83
Consumer Products	*1.10*	*1.14*	*1.17*	*1.20*	*1.24*	*1.25*	*1.26*	*1.28*	*1.29*	*1.30*	*1.31*	*1.33*	*1.34*	*1.35*	*1.36*
Architectural Coatings and Related Process Solv	*0.47*	*0.49*	*0.51*	*0.53*	*0.55*	*0.56*	*0.57*	*0.58*	*0.59*	*0.60*	*0.61*	*0.62*	*0.62*	*0.63*	*0.64*
Pesticides/Fertilizers	*1.79*	*1.78*	*1.76*	*1.74*	*1.72*	*1.72*	*1.71*	*1.70*	*1.69*	*1.68*	*1.67*	*1.66*	*1.66*	*1.65*	*1.64*
Asphalt Paving/Roofing	*0.14*	*0.14*	*0.15*	*0.15*	*0.16*	*0.16*	*0.16*	*0.17*	*0.17*	*0.17*	*0.18*	*0.18*	*0.18*	*0.19*	*0.19*
Miscellaneous Processes	3.48	3.47	3.47	3.46	3.45	3.45	3.44	3.44	3.43	3.43	3.42	3.42	3.42	3.41	3.41
Residential Fuel Combustion	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Farming Operations	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*	*2.53*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fires	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Managed Burning and Disposal	*0.90*	*0.89*	*0.88*	*0.88*	*0.87*	*0.86*	*0.86*	*0.85*	*0.85*	*0.84*	*0.84*	*0.84*	*0.83*	*0.83*	*0.82*
Cooking	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*
Other (Miscellaneous Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Areawide Sources	**6.98**	**7.02**	**7.05**	**7.09**	**7.12**	**7.14**	**7.15**	**7.16**	**7.17**	**7.18**	**7.19**	**7.21**	**7.22**	**7.23**	**7.24**
Mobile Sources															
On-Road Vehicles	2.78	2.63	2.60	2.37	2.28	2.18	2.19	2.02	2.00	1.99	1.87	1.85	1.83	1.80	1.77
Off-Road Vehicles	4.13	4.08	4.03	3.97	3.93	3.89	3.87	4.08	4.08	4.08	4.07	4.06	4.05	4.05	4.06
Total Mobile Sources	**6.92**	**6.71**	**6.63**	**6.34**	**6.21**	**6.07**	**6.06**	**6.10**	**6.08**	**6.06**	**5.94**	**5.91**	**5.88**	**5.85**	**5.83**
Total for Imperial County	**15.26**	**15.09**	**15.04**	**14.77**	**14.68**	**14.56**	**14.57**	**14.62**	**14.62**	**14.62**	**14.51**	**14.51**	**14.50**	**14.50**	**14.51**

Notes:
Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.
Totals may not add up due to rounding.

ED_004125_00037442-00025

Table H-3. NO_X Emissions by Major Source Category in Imperial County, 2016-2030
Imperial County PM_{10} Plan

Source Category	NO_X (tons/day)														
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stationary Sources															
Fuel Combustion	1.63	1.62	1.61	1.60	1.71	1.71	1.71	1.70	1.69	1.69	1.68	1.67	1.66	1.66	1.66
Electric Utilities	*0.37*	*0.36*	*0.36*	*0.36*	*0.36*	*0.37*	*0.38*	*0.39*	*0.40*	*0.40*	*0.40*	*0.40*	*0.40*	*0.40*	*0.40*
Cogeneration	*0.02*	*0.02*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*
Manufacturing and Industrial	*0.44*	*0.44*	*0.44*	*0.43*	*0.48*	*0.47*	*0.46*	*0.46*	*0.45*	*0.45*	*0.45*	*0.44*	*0.44*	*0.43*	*0.43*
Food and Agricultural Processing	*0.11*	*0.10*	*0.10*	*0.09*	*0.09*	*0.09*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.07*	*0.07*	*0.07*	*0.07*
Service and Commercial	*0.69*	*0.69*	*0.69*	*0.68*	*0.76*	*0.75*	*0.75*	*0.74*	*0.73*	*0.73*	*0.73*	*0.72*	*0.72*	*0.72*	*0.73*
Other (Fuel Combustion)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Waste Disposal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sewage Treatment	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Landfills	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Waste Disposal)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laundering	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Refining	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	0.07	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11
Food and Agriculture	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*
Mineral Processes	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.06*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Industrial Processes)	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*
Total Stationary Sources	**1.71**	**1.69**	**1.69**	**1.68**	**1.80**	**1.80**	**1.80**	**1.79**	**1.79**	**1.78**	**1.78**	**1.77**	**1.76**	**1.76**	**1.77**
Areawide Sources															
Solvent Evaporation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solv	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Asphalt Paving/Roofing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	0.52	0.52	0.52	0.51	0.51	0.51	0.50	0.50	0.50	0.50	0.50	0.49	0.49	0.49	0.49
Residential Fuel Combustion	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*
Farming Operations	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fires	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Managed Burning and Disposal	*0.44*	*0.43*	*0.43*	*0.43*	*0.42*	*0.42*	*0.42*	*0.41*	*0.41*	*0.41*	*0.41*	*0.41*	*0.40*	*0.40*	*0.40*
Cooking	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Miscellaneous Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Areawide Sources	**0.52**	**0.52**	**0.52**	**0.51**	**0.51**	**0.51**	**0.50**	**0.50**	**0.50**	**0.50**	**0.50**	**0.49**	**0.49**	**0.49**	**0.49**
Mobile Sources															
On-Road Vehicles	7.42	6.93	6.58	5.80	5.66	5.20	4.89	3.53	3.46	3.41	3.28	3.25	3.23	3.23	3.24
Off-Road Vehicles	7.49	7.25	6.94	6.65	6.39	6.13	5.84	7.67	7.45	7.22	7.00	6.80	6.62	6.44	6.27
Total Mobile Sources	**14.91**	**14.18**	**13.52**	**12.45**	**12.06**	**11.33**	**10.73**	**11.20**	**10.91**	**10.63**	**10.29**	**10.05**	**9.84**	**9.67**	**9.51**
Total for Imperial County	**17.14**	**16.40**	**15.72**	**14.65**	**14.36**	**13.63**	**13.03**	**13.49**	**13.20**	**12.91**	**12.56**	**12.31**	**12.10**	**11.92**	**11.77**

Notes:
Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.
Totals may not add up due to rounding.

ED_004125_00037442-00026

Table H-4. SO_X Emissions by Major Source Category in Imperial County, 2016-2030
Imperial County PM_{10} Plan

Source Category	SO_X (tons/day)														
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stationary Sources															
Fuel Combustion	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Electric Utilities	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cogeneration	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Manufacturing and Industrial	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Food and Agricultural Processing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Service and Commercial	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Fuel Combustion)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Waste Disposal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sewage Treatment	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Landfills	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Waste Disposal)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cleaning and Surface Coatings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laundering	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Refining	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food and Agriculture	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Mineral Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Industrial Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Stationary Sources	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**
Areawide Sources															
Solvent Evaporation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solv	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Asphalt Paving/Roofing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07
Residential Fuel Combustion	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Farming Operations	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fires	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Managed Burning and Disposal	*0.08*	*0.08*	*0.08*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*	*0.07*
Cooking	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Miscellaneous Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Areawide Sources	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**	**0.07**
Mobile Sources															
On-Road Vehicles	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Off-Road Vehicles	0.22	0.22	0.22	0.23	0.23	0.23	0.23	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Total Mobile Sources	**0.25**	**0.25**	**0.26**	**0.27**	**0.27**	**0.27**	**0.27**	**0.16**	**0.16**	**0.16**	**0.16**	**0.17**	**0.17**	**0.17**	**0.17**
Total for Imperial County	**0.34**	**0.34**	**0.34**	**0.35**	**0.35**	**0.35**	**0.35**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**	**0.25**

Notes:
Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.
Totals may not add up due to rounding.

ED_004125_00037442-00027

Table H-5. NH_3 Emissions by Major Source Category in Imperial County, 2016-2030
Imperial County PM_{10} Plan

Source Category	NH_3 (tons/day)														
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Stationary Sources															
Fuel Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Electric Utilities	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Cogeneration	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Manufacturing and Industrial	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Food and Agricultural Processing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Service and Commercial	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*
Other (Fuel Combustion)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Waste Disposal	1.49	1.49	1.49	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.51	1.51	1.51
Sewage Treatment	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Landfills	*0.07*	*0.07*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.08*	*0.09*	*0.09*	*0.09*	*0.09*	*0.09*
Other (Waste Disposal)	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*	*1.42*
Cleaning and Surface Coatings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laundering	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Degreasing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Coatings and Related Process Solvents	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Adhesives and Sealants	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Production and Marketing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Petroleum Refining	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Petroleum Marketing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Petroleum Production and Marketing)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Industrial Processes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food and Agriculture	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Mineral Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Metal Processes	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Industrial Processes)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Total Stationary Sources	**1.49**	**1.50**	**1.50**	**1.50**	**1.50**	**1.50**	**1.51**	**1.51**	**1.51**	**1.51**	**1.51**	**1.51**	**1.51**	**1.51**	**1.51**
Areawide Sources															
Solvent Evaporation	15.34	15.19	15.04	14.89	14.74	14.66	14.59	14.52	14.45	14.37	14.30	14.23	14.16	14.09	14.02
Consumer Products	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Architectural Coatings and Related Process Solv	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Pesticides/Fertilizers	*15.34*	*15.19*	*15.04*	*14.89*	*14.74*	*14.66*	*14.59*	*14.52*	*14.45*	*14.37*	*14.30*	*14.23*	*14.16*	*14.09*	*14.02*
Asphalt Paving/Roofing	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Miscellaneous Processes	15.36	15.37	15.38	15.40	15.41	15.41	15.41	15.42	15.42	15.42	15.43	15.43	15.43	15.44	15.44
Residential Fuel Combustion	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Farming Operations	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*	*14.80*
Construction and Demolition	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Paved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Unpaved Road Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fugitive Windblown Dust	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Fires	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Managed Burning and Disposal	*0.19*	*0.19*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.18*	*0.17*	*0.17*	*0.17*	*0.17*
Cooking	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Other (Miscellaneous Processes)	*0.37*	*0.39*	*0.40*	*0.41*	*0.42*	*0.43*	*0.43*	*0.44*	*0.44*	*0.45*	*0.45*	*0.45*	*0.46*	*0.46*	*0.47*
Total Areawide Sources	**30.70**	**30.56**	**30.42**	**30.28**	**30.14**	**30.07**	**30.00**	**29.93**	**29.87**	**29.80**	**29.73**	**29.66**	**29.60**	**29.53**	**29.46**
Mobile Sources															
On-Road Vehicles	0.21	0.21	0.22	0.20	0.20	0.20	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.20	0.20
Off-Road Vehicles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Mobile Sources	**0.22**	**0.21**	**0.22**	**0.21**	**0.21**	**0.20**	**0.21**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**
Total for Imperial County	**32.41**	**32.27**	**32.14**	**31.99**	**31.85**	**31.78**	**31.72**	**31.64**	**31.58**	**31.51**	**31.43**	**31.37**	**31.30**	**31.24**	**31.17**

Notes:
Emissions for Imperial County were queried from the California Emissions Projection Analysis Model (CEPAM), Version 1.05.
Totals may not add up due to rounding.

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